

## REMARKS/ARGUMENTS

The rejections presented in the Office Action dated August 23, 2005 (hereinafter Office Action) have been considered. Claims 1-20 remain pending in the application. Claims 1, 8, 13, and 20 have been amended, Reconsideration of the pending claims and allowance of the application in view of the present response is respectfully requested.

Claims 1-2 and 13-16 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Publication No. 2003/0112756 to *Le Gouriellec et al.* (hereinafter *Le Gouriellec*). The Applicants respectfully traverse in view of the amendments and remarks provided herein.

The Applicants respectfully submit that the claims as previously presented are not rendered obvious in view of *Le Gouriellec*. However, in order to facilitate prosecution of the application, the Applicants present this response with amendment to clarify particular aspects of the claimed invention.

Particular claims have been amended to at least set forth that the QoS action on a data stream taken at a first network entity limits consumption of resources of the first network entity by the data stream. The QoS action is communicated to a second network entity that subsequently processes the data stream. Further, a second network entity increases a relative precedence for limiting consumption of resources of the second network entity by other data streams processed by the second network entity in order to limit the effect of the QoS action taken on the data stream by the first network entity.

In order to establish *prima facie* obviousness based on a combination of references, three basic criteria must be met, as is set forth in M.P.E.P., §2143:

- 1) There must be some suggestion or motivation, either in the reference itself or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings;
- 2) There must be a reasonable expectation of success; and
- 3) The prior art references must teach or suggest all of the claim limitations.

As set forth in greater detail below, the Applicants contend that *prima facie* obviousness has not been established, for reasons including the failure of the prior art references (either alone or in combination) to teach or suggest all of the claim limitations, and that a legally requisite motivation to combine such references has not been established.

In one point of contrast, *Le Gouriellec* describes nodes at a network edge that discard packets in a traffic flow that exceed a subscribed committed rate (CR) and excess rate (ER) (see, e.g., *Le Gouriellec* at [0028]). If the packets exceed the CR but not the ER, the edge node marks the packets and passes them to subsequent core nodes in the network. This is entirely different than the communication of QoS actions as set forth in independent Claims 1 and 13. In those claims, the QoS action at a first network entity limits the consumption of resources of the first network entity by the data stream. In contrast, the markings communicated between nodes in *Le Gouriellec* are not actions that limit the consumption of resources by that stream at the edge node. The packets that exceed CR and ER in *Le Gouriellec* are dropped at the edge node but not marked, and *Le Gouriellec* is silent on marking of data streams that had some packets dropped in this way. The only packets that are marked in *Le Gouriellec* are those that exceed the CR but are not dropped. Therefore, the edge marking of *Le Gouriellec* is not a QoS action that limits the marked data stream's consumption of resources at the edge node.

The only actions that limit the consumption of resources at the edge nodes in *Le Gouriellec* are the dropping of packets of streams that exceed CR and ER, and *Le Gouriellec* is silent on communicating this action to subsequent processing nodes. In order to support a *prima facie* case of obviousness under §103, the Examiner must show that *Le Gouriellec* teaches or suggests all the claim limitations, and *Le Gouriellec* at least fails to teach or suggest a QoS action taken on a data stream at a first network entity that limits consumption of resources by data stream at the first network entity, and communicating the QoS action to a second network entity. Therefore, *Le Gouriellec* does not teach all of the limitations of these claims, and Applicants respectfully submit Claims 1 and 13 are allowable over *Le Gouriellec*.

Applicants also note that the Office Action did not address each and every limitation of Claims 1 and 13 as previously presented, and as required in order to support a *prima facie* case of obviousness. In particular, the Office Action did not present any evidence to show that *Le Gouriellec* teaches or suggests that a second network entity that processes the data stream alters its congestion processing to limit the effect of the QoS action taken on the data stream by the first network entity. Even assuming *arguendo* that the edge marking of *Le Gouriellec* involves communicating a QoS action to a second node, nowhere does *Le Gouriellec* describe limiting the effect of this alleged “action.” *Le Gourielle* only states that the marked packets can “be discarded in case of network congestion,” presumably at an interior node (*see, e.g., Le Gouriellec* at [0028]-[0029]). This fails to teach or suggest limiting the effect of the QoS action taken on the data stream by the first network entity. Dropping a marked packet is not limiting the effect of the marking, it is just carrying out the actions indicated by the marking. Therefore, *Le Gouriellec* does not teach this aspect of Claims 1 and 13, and Applicants respectfully submit that Claims 1 and 13 are allowable over *Le Gouriellec*.

Claims 3-7 and 17-20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Le Gouriellec* as applied to claims 1-2 and 13-16, and further in view of U.S. Patent No. 6,631,135 to *Wojcik* (hereinafter *Wojcik*). Applicants respectfully traverse the rejection.

For the rejections of Claims 3-7 and 17-19, the Examiner relies on *Le Gourielle* as teaching the substance of the claims from which Claims 3-7 and 17-19 depend, namely, Claims 1 and 13, respectively. As set forth in greater detail above with respect to Claims 1 and 13, *Le Gouriellec* fails to teach or suggest that a QoS action taken on a data stream by a first network entity to limit consumption of resources of the first network entity is communicated to a second network entity that subsequently processes the at least one data stream, nor does *Le Gouriellec* teach or suggest the second network entity takes actions to limit the effect of the QoS action taken on the data stream by the first network entity. The Office Action did not rely on *Wojcik* as providing a remedy to these deficiencies of *Le Gouriellec*, nor does *Wojcik* provide such a remedy. Thus, because neither *Le Gouriellec*

nor *Wojcik* teach at least the recitations of Claim 3-7 and 17-19, a combination of *Le Gouriellec* and *Wojcik* fails to teach these recitations.

Regarding independent Claim 20, the Office Action merely states that “it would be obvious to one of ordinary skill in the art to implement the invention of *Le Gouriellec et al/Wojcik* in software in order to ensure its repeatability.” This statement presumes that the combination of *Le Gouriellec* with *Wojcik* teaches all of the limitations of Claim 20, yet no specific facts were set forth to prove the required elements of an obviousness rejection under 35 U.S.C. §103(a). As set forth in M.P.E.P. §707.07(d), the grounds of rejection are to be fully and clearly stated. Claim 20 is an independent claim that sets forth particular aspects of the invention, therefore a conclusory statement that the combination of *Le Gouriellec* and *Wojcik* renders the claim obvious is insufficient to sustain a §103 rejection. Nonetheless, Applicants note that Claim 20, *inter alia*, includes features analogous to those of Claims 1 and 13 described above that are not taught by the combination of *Le Gouriellec* and *Wojcki*. Therefore these references also fail to render Claim 20 obvious, and Claim 20 is allowable over *Le Gouriellec* and *Wojcik* for similar reasons as to Claims 1 and 13.

Regarding Claims 6-7, the Office Action states “the QoS information is signaled between the elements, and out of band transmission would be an obvious way to send it.” The Applicants submit that this is tantamount asserting Official Notice that an out of band transmission of QoS information is obvious. Applicants respectfully assert that providing out-of-band signalling information indicative of the QoS action does not constitute facts outside of the record which are capable of instant and unquestionable demonstration as being obvious in the art. The references relied on in the Office Action, for example, fail to disclose this purportedly obvious fact. Applicants contend that reasonable doubt exists regarding the circumstances justifying the Examiner’s exercise of Official Notice, and request that the Examiner provide evidence that demonstrates the appropriateness of the officially noticed facts pursuant to MPEP § 2144.03. Applicants reserve the opportunity to respond to the Examiner’s comments concerning any such judicially noticed facts. Applicants respectfully submit that Claims 6-7 are allowable *Le Gouriellec* and *Wojcik*.

Applicants also respectfully suggest there is also no motivation to combine *Le*

*Gouriellec* with *Wojcik*. With regards to Claim 3, the Office Action states it would have been obvious to make the combination “in order to provide a means for using historical data to provide guidance to the QoS that needs to be applied to the system.” This assertion does not rise to the level of clear and particular evidence required to establish motivation to combine references. There must be some actual motivation to combine the cited references found in the references themselves, the knowledge of one of ordinary skill in the art or from the nature of the problem to be solved that would suggest the combination. Without a suggestion of the desirability of “the combination,” a combination of such references is made in hindsight, and the “range of sources available, however, does not diminish the requirement for actual evidence.” *In re Dembiczak*, 50 USPQ2d 1614 (Fed. Cir. 1999). Broad conclusory statements regarding the teaching of multiple references, standing alone, are not evidence. *Id*

With respect to Claim 3, there was no evidence in *Le Gourielle* itself or in the knowledge of one of ordinary skill in the art to suggest that the system of *Le Gouriellec* would need or benefit from “guidance” of historical data in order to apply QoS. It is respectfully submitted, therefore, and the burden of showing a “clear and particular” motivation to combine has not been met with respect to Claim 3. Applicants also note that the Office Action did not set forth with any particularity a motivation to combine *Le Gouriellec* with *Wojcik* with regards to Claims 4-7 and 17-20, thus a *prima facie* case of obviousness has not been established with respect to these claims either. Therefore, Applicants submit that Claims 3-7 and 17-20 are allowable over *Le Gouriellec* and *Wojcik*.

Claims 8-12 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Le Gouriellec* as applied to Claims 1-2 and 13-16 above, and further in view of U.S. Patent No. 6,252,848 to *Skirmont* (hereinafter *Skirmont*). Applicants respectfully traverse the rejection. Applicants note that independent Claim 8 recites, among other things, implementing QoS actions at a first forwarding terminal that limits consumption of resources of the first forwarding terminal. The QoS actions of the first forwarding terminal are signaled to a second forwarding terminal that takes actions to limit the effect of the QoS action taken by the first forwarding terminal. As set forth in greater detail above, *Le Gouriellec* fails to teach or suggest similar features with respect to Claims 1 and 13, thus *Le Gouriellec* fails to

teach these features with respect to Claim 8. The Office Action did not rely on *Skirmont* as providing a remedy to these deficiencies of *Le Gouriellec*, nor does *Skirmont* provide such a remedy. Thus, because neither *Le Gouriellec* nor *Skirmont* teach at least the recitations of Claim 8, a combination of *Le Gouriellec* nor *Skirmont* fails to teach these recitations.

In addition to the arguments presented above, Applicants note that 2-7 depend from independent Claim 1; dependent Claims 9-12 depend from independent Claim 8; and dependent Claims 14-19 depend from independent Claim 13. Claims 2 and 14-16 stand rejected as being obvious in view of *Le Gouriellec*, Claims 3-7 and 17-19 stand rejected as being obvious in view of *Le Gouriellec* and *Wojcik*, and Claims 9-12 stand rejected as being obvious in view of *Le Gouriellec* and *Skirmont*. While Applicant does not acquiesce with the particular rejections to these dependent claims, these rejections are now moot in view of the remarks made in connection with independent Claims 1, 8, and 13. These dependent claims include all of the limitations of the base claim and any intervening claims, and recite additional features which further distinguish these claims from the references relied upon in the Office Action. Therefore, dependent Claims 2-7, 9-12, and 14-19 are also in condition for allowance.

Claim 1 stands rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,535,482 to *Hadi Salim et al.* (hereinafter *Hadi Salim*). Applicants respectfully traverse the rejection. Applicants submit that Claim 1, as previously presented and as currently amended, is not rendered obvious by *Hadi Salim*. In particular, *Hadi Salim* fails to teach or suggest every limitation of Claim 1 because *Hadi Salim* fails to describe communicating a QoS action taken by a first network entity to a second network entity that subsequently processes the at least one data stream, nor does *Hadi Salim* describe to limiting the effect of the QoS action taken on the at least one data stream by the first network entity.

*Hadi Salim* describes discarding a packet at an IP router that receives a packet from a TCP source node. This packet drop is communicated to the TCP source node using an ISQ message. In response, the TCP source can adjust its TCP window to reduce congestion (*Hadi Salim*, FIG. 2 and col. 6, lines 2-10). However, Claim 1 recites the taking QoS

actions at a second entity that processes the stream subsequent to processing by the first entity in order to limit the effect of the QoS action taken at the first entity. In contrast, the system of *Hadi Salim* describes altering congestion processing at a node the processes the data prior to the node that performs a packet drop. Therefore, *Hadi Salim* does not teach or suggest at least this aspect of Claim 1.

In addition, Claim 1 also describes increasing the probability that further QoS actions are preferentially applied to other data streams at the second entity to limit the effect of actions taken at the first entity. In contrast, the adjustment of a TCP window at the TCP source described in *Hadi Salim* only occurs on a single stream, and this processing is entirely independent of the processing of any other streams by the nodes. Therefore, *Hadi Salim* fails to teach or suggest increasing a relative precedence for limiting consumption of resources of a second network entity by other data streams processed by the second network entity in order to limit the effect of the QoS action taken on one data stream by the first network entity.

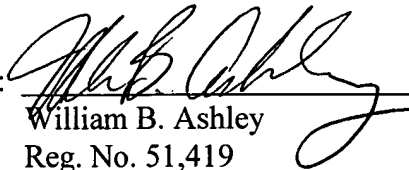
The Office Action states that *Hadi Salim* does not describe monitoring congestion level, but that one skilled in the art would recognize that is implied in or an obvious variation. While not acquiescing to this characterization, Applicants submit that this is a moot point because *Hadi Salim* fails to teach or suggest modifying precedence of other data streams processed by a second network entity in order to limit the effect of the QoS action taken on one data stream by a first network entity, where the second entity processes the data subsequent to the first entity. The Examiner did not rely on Official Notice to cure these deficiencies of *Hadi Salim*, nor do these deficiencies constitute facts outside of the record which are capable of demonstration as being well-known in the art. Therefore Applicants respectfully submit that a case of prima facie obviousness has not been established, and that Claim 1 is allowable over *Hadi Salim*.

If the Examiner believes it necessary or helpful, the undersigned agent of record invites the Examiner to contact him at 952.854.2700 to discuss any issues related to this case.

Respectfully submitted,

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